

SN74F126 QUADRUPLE BUS BUFFER GATE WITH 3-STATE OUTPUTS

SDFS017B – JANUARY 1989 – REVISED NOVEMBER 2002

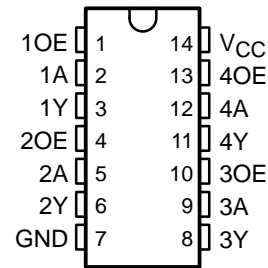
- 4.5-V to 5.5-V V_{CC} Operation
- Max t_{pd} of 6.5 ns at 5 V
- 3-State Outputs Drive Bus Lines or Buffer Memory Address Registers

description/ordering information

The SN74F126 bus buffer features independent line drivers with 3-state outputs. Each output is disabled when the associated output-enable (OE) input is low.

To ensure the high-impedance state during power up or power down, OE should be tied to GND through a pulldown resistor; the minimum value of the resistor is determined by the current-sourcing capability of the driver.

D, N, OR NS PACKAGE
(TOP VIEW)



ORDERING INFORMATION

T_A	PACKAGE†		ORDERABLE PART NUMBER	TOP-SIDE MARKING
0°C to 70°C	PDIP – N	Tube	SN74F126N	SN74F126N
	SOIC – D	Tube	SN74F126D	F126
		Tape and reel	SN74F126DR	
	SOP – NS	Tape and reel	SN74F126NSR	74F126

† Package drawings, standard packing quantities, thermal data, symbolization, and PCB design guidelines are available at www.ti.com/sc/package.

FUNCTION TABLE
(each buffer)

INPUTS		OUTPUT
OE	A	Y
H	H	H
H	L	L
L	X	Z



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PRODUCTION DATA information is current as of publication date. Products conform to specifications per the terms of Texas Instruments standard warranty. Production processing does not necessarily include testing of all parameters.

 **TEXAS
INSTRUMENTS**

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electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

PARAMETER	TEST CONDITIONS	V _{CC}	MIN	TYP†	MAX	UNIT
V _{IK}	I _I = -18 mA	4.5 V			-1.2	V
V _{OH}	I _{OH} = -3 mA	4.5 V	2.4	3.3		V
	I _{OH} = -15 mA		2	3.1		
	I _{OH} = -3 mA	4.75 V	2.7			
V _{OL}	I _{OL} = 64 mA	4.5 V		0.4	0.55	V
I _I	V _I = 7 V	0			0.1	mA
I _{IH}	V _I = 2.7 V	5.5 V			20	μA
I _{IL}	V _I = 0.5 V	5.5 V			-20	μA
I _{OZH}	V _O = 2.7 V	5.5V			50	μA
I _{OZL}	V _O = 0.5 V	5.5 V			-50	μA
I _{OS} ‡	V _O = 0	5.5 V	-100		-225	mA
I _{CCH}	Outputs open	5.5 V		20	30	mA
I _{CCL}	Outputs open	5.5 V		32	48	mA
I _{CCZ}	Outputs open	5.5 V		26	39	mA

† All typical values are at V_{CC} = 5 V, T_A = 25°C.

‡ Not more than one output should be shorted at a time, and the duration of the short circuit should not exceed one second.

switching characteristics over recommended operating free-air temperature range (unless otherwise noted) (see Figure 1)

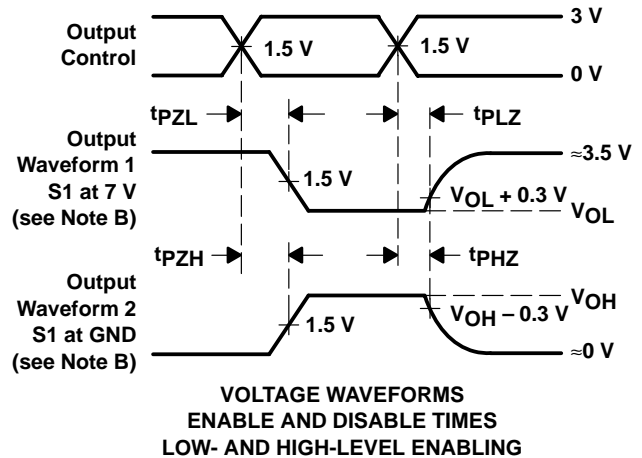
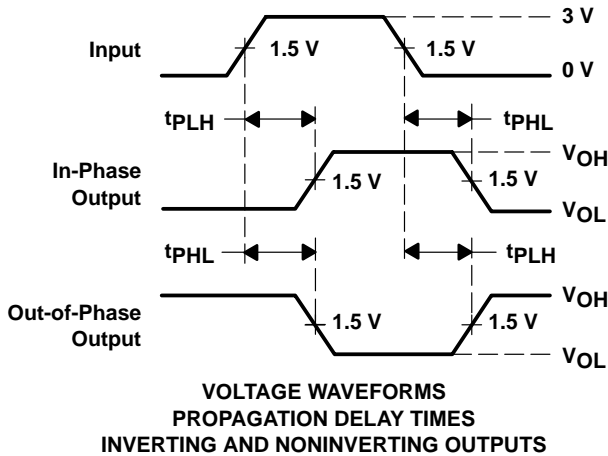
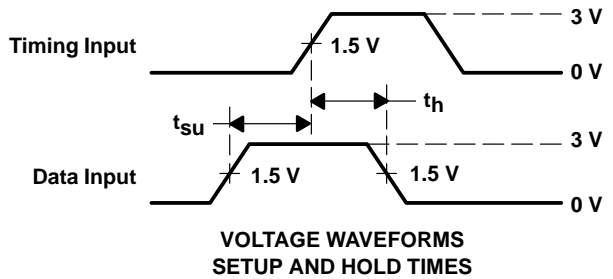
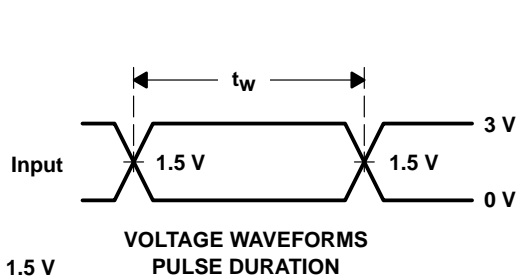
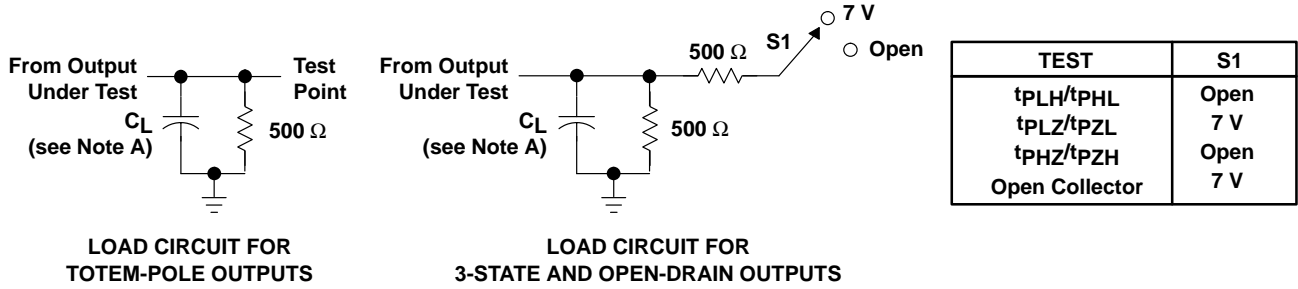
PARAMETER	FROM (INPUT)	TO (OUTPUT)	V _{CC} = 5 V, C _L = 50 pF, R _L = 500 Ω, T _A = 25°C			V _{CC} = 4.5 V to 5.5 V, C _L = 50 pF, R _L = 500 Ω, T _A = MIN to MAX§		UNIT
			MIN	TYP	MAX	MIN	MAX	
t _{PLH}	A	Y	2	4	6.5	2	7	ns
t _{PHL}			3	5.5	8	2.8	8.5	
t _{PZH}	OE	Y	3.8	6	7.5	3.3	8.5	ns
t _{PZL}			3.8	6	8	3.5	8.5	
t _{PHZ}	OE	Y	2	4.5	6.5	2	7.5	ns
t _{PLZ}			3	5.5	7.5	3	8	

§ For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.

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PARAMETER MEASUREMENT INFORMATION



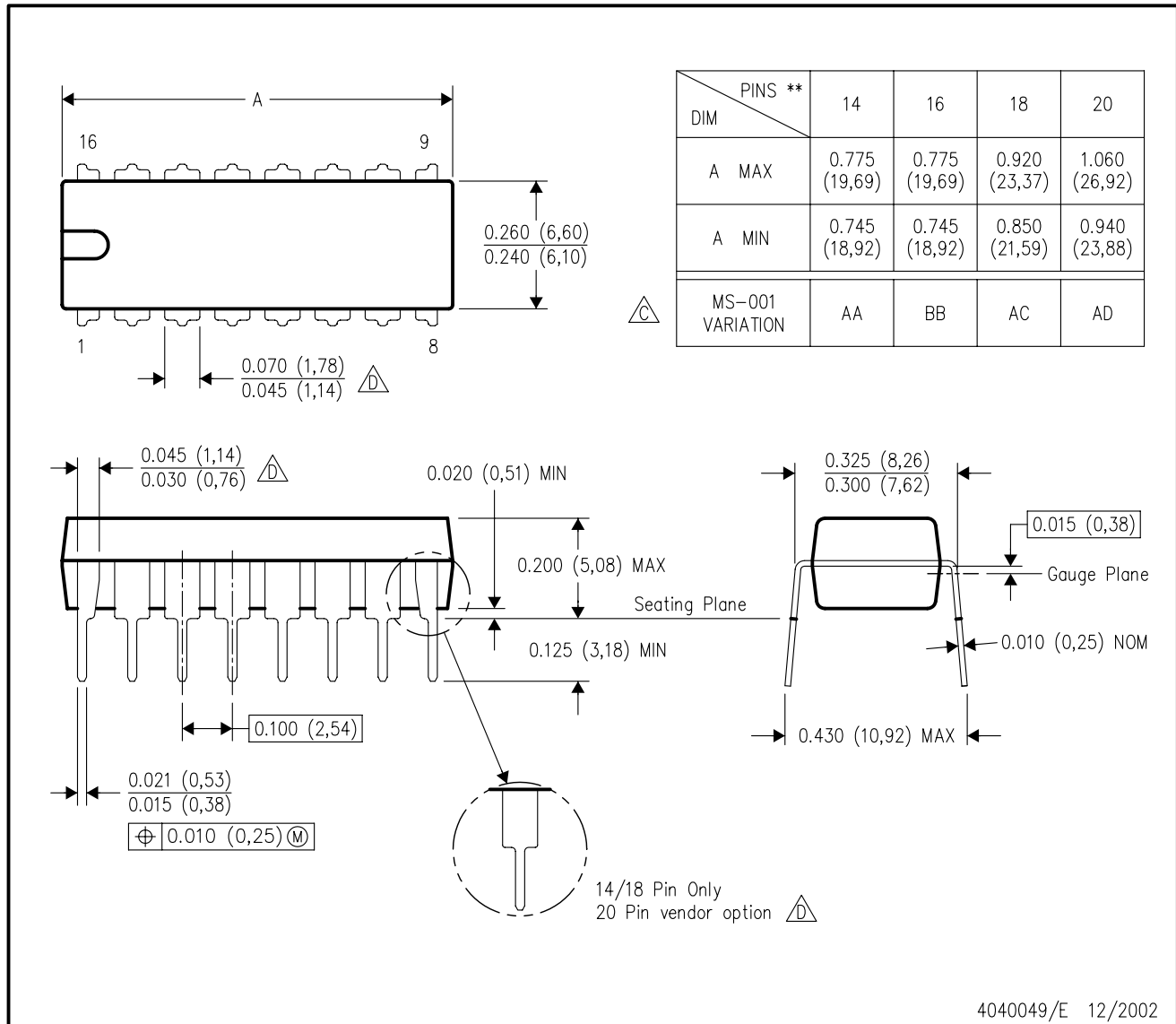
- NOTES:
- C_L includes probe and jig capacitance.
 - Waveform 1 is for an output with internal conditions such that the output is low except when disabled by the output control. Waveform 2 is for an output with internal conditions such that the output is high except when disabled by the output control.
 - All input pulses are supplied by generators having the following characteristics: $PRR \leq 1\text{ MHz}$, $Z_O = 50\ \Omega$, $t_r \leq 2.5\text{ ns}$, $t_f \leq 2.5\text{ ns}$, duty cycle = 50%.
 - The outputs are measured one at a time with one input transition per measurement.

Figure 1. Load Circuit and Voltage Waveforms

N (R-PDIP-T**)

PLASTIC DUAL-IN-LINE PACKAGE

16 PINS SHOWN

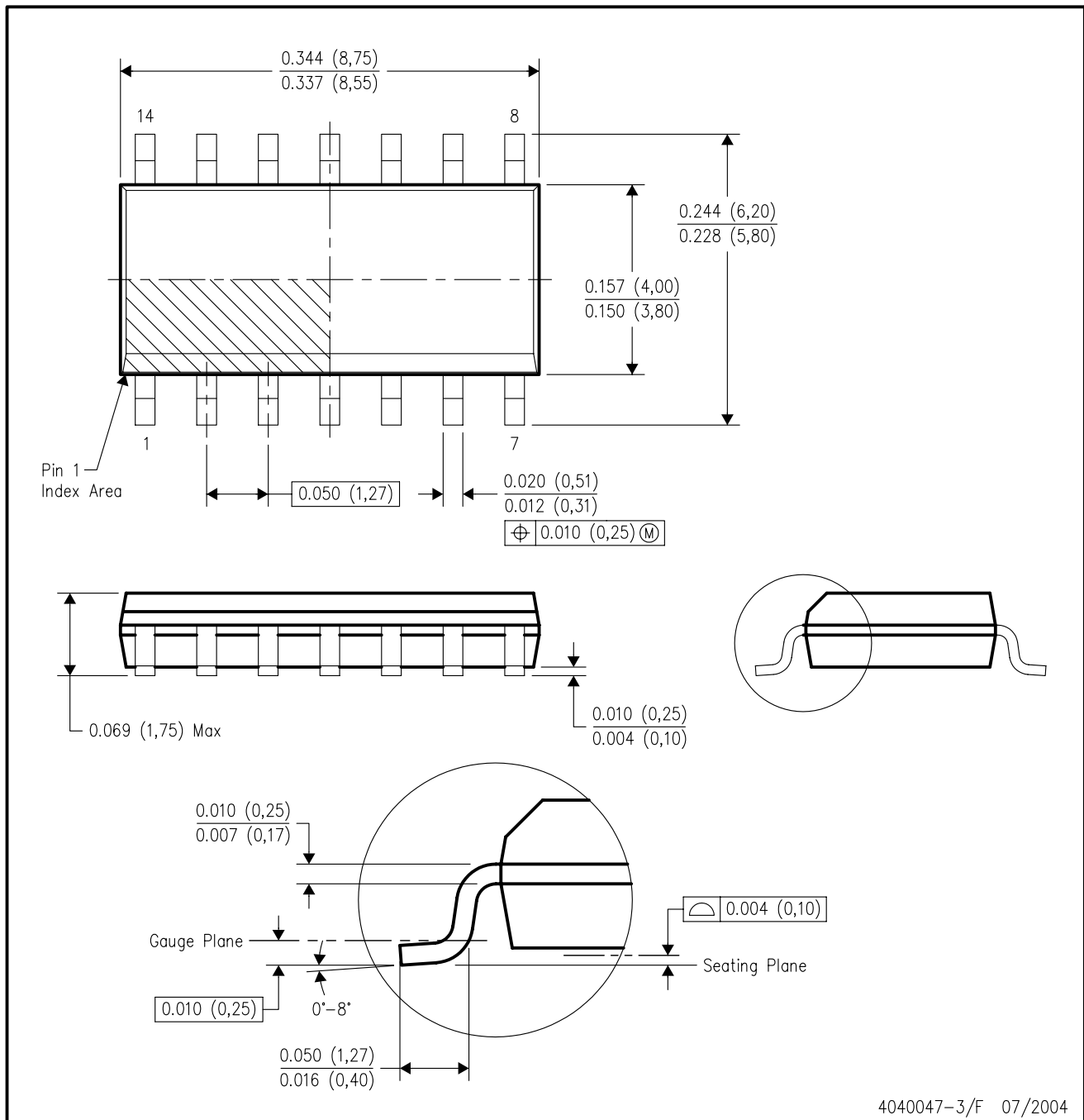


- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C Falls within JEDEC MS-001, except 18 and 20 pin minimum body length (Dim A).
 - D The 20 pin end lead shoulder width is a vendor option, either half or full width.

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D (R-PDSO-G14)

PLASTIC SMALL-OUTLINE PACKAGE



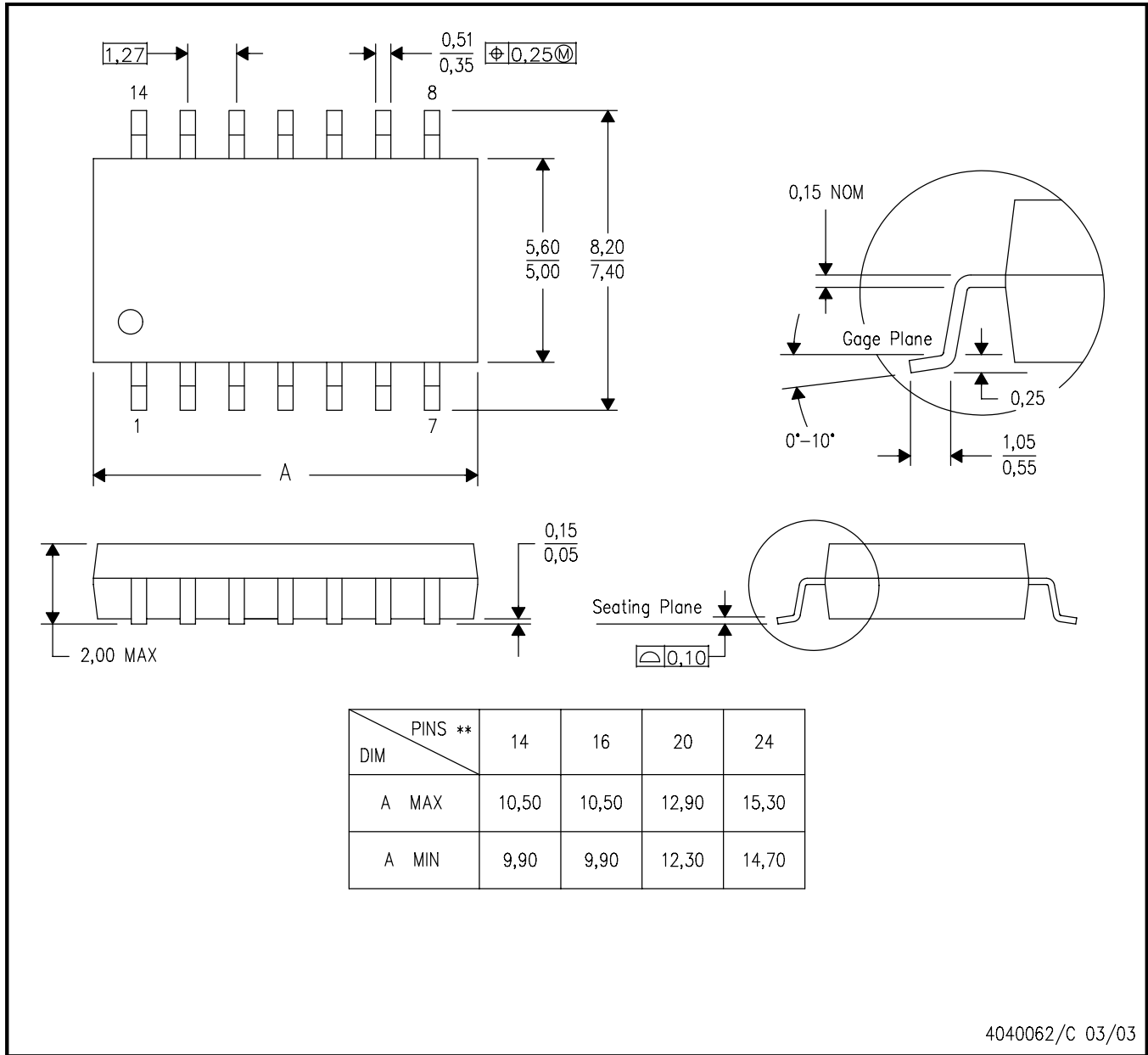
- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. Body dimensions do not include mold flash or protrusion not to exceed 0.006 (0,15).
 - D. Falls within JEDEC MS-012 variation AB.

MECHANICAL DATA

NS (R-PDSO-G**)

PLASTIC SMALL-OUTLINE PACKAGE

14-PINS SHOWN



- NOTES:
- A. All linear dimensions are in millimeters.
 - B. This drawing is subject to change without notice.
 - C. Body dimensions do not include mold flash or protrusion, not to exceed 0,15.

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